CHAPTER 1

EVALUATION PROGRESS REPORT, 1986-1987

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INTRODUCTION

Each S/HMO demonstration began operation during the first quarter of 1985 and will operate for 66 months under the current waiver authorization. The evaluation began in October 1985 and continues through November 1989. This chapter covers the first 24 months of the evaluation plan. Activities undertaken during the evaluation planning phase, October 1985 through May 1986, included visiting each of the demonstration sites to review management information systems and become acquainted with personnel and organizational structure; reviewing demonstration protocols, quarterly reports, and other documents to become fully acquainted with the planned and current operations of the demonstrations; corresponding with each site regarding enrollment procedures; assessing site experiences with the Health Status Form (HSF) and the Comprehensive Assessment Form (CAF); and pre-testing data collection instruments.

During the evaluation of the first operational year, June 1986 to September 1987, all major planned activities were completed. These included developing comparison group samples for fee-for-service (FFS) beneficiaries and HMO enrollees; conducting health status interviews and in-home assessments with comparison group samples; selecting a S/HMO member sample; conducting consumer choice interviews with S/HMO, FFS, and HMO enrollees; conducting in-home assessments with moderately impaired S/HMO members; tracking quarterly the out-of-pocket expenditures of impaired S/HMO enrollees and FFS beneficiaries; surveying HMO disenrollees; conducting three case study site visits to each demonstration market area; and developing an integrated health status and Medicare claims data file.

Four factors have necessitated adjustments to the proposed study design: a slower than expected rate of S/HMO enrollments; lower than expected S/HMO enrollment of Medicaid eligible persons; identification of important differences among the sites in their procedures for screening and classifying enrollees into severely impaired and unimpaired groups; and the rapid growth of enrollment of Medicare beneficiaries in Medicare risk contract HMOs, arguing for HMO-S/HMO comparisons, where feasible.

To address these issues, the evaluation design was modified to:

- Expand the study sample to include both severely and moderately impaired persons;
- Expand the impaired and unimpaired fee-for-service comparison group to better examine changes in health status, mortality, and Medicaid spend-down;
- Develop an HMO comparison sample and incorporate data collected from HMO enrollees into an analysis of selection bias, consumer choice, and satisfaction;

- Convert the consumer choice survey from a mail questionnaire to a telephone interview.

The study dropped a proposed analysis of service use and consumer choice by persons eligible for Medicaid at the time of S/HMO enrollment. The number of persons among S/HMO enrollees and the fee-for-service comparison group who spend down to Medicaid eligibility will continue to be studied.

The analysis of informal caregivers was also modified. Information on informal caregivers is obtained directly from the impaired beneficiaries and family members rather than through a proposed separate survey of informal caregivers.

IMPACT OF S/HMO ENROLLMENT ON SAMPLE DESIGN

Figure 1 lists the sample and study areas of the evaluation experimental and comparison groups. Sample development and data collection plans were influenced by S/HMO enrollment levels and the prevalence of enrollee impairment. In the original demonstration design, each S/HMO site planned to enroll at least 4000 persons, including a severely impaired population estimated at approximately 200 nursing home certifiable (NHC) cases at the time of enrollment. The number of severely impaired (i.e., NHC) persons at enrollment, plus any person who became NHC after enrollment, established the maximum sample size of severely impaired persons in the experimental group. Thus, in the original demonstration and evaluation design, a total population of 800 NHC persons at enrollment and perhaps another 400 who would become NHC sometime during the 24-month period after enrollment was expected.

With the exception of Kaiser Medicare Plus II, the sites have had slower enrollment than projected. Total enrollment among all sites on June 1, 1986 was about 8,600, or about half the planned level. Similarly, the number of NHC persons was half the number expected.

In response to these circumstances, the evaluator took three steps to expand the impaired group sample size and maintain statistical power for the evaluation:

- Primary data collection was delayed three months to allow the sites more time to build enrollments.

- S/HMO enrollments through June 1, 1986 were included in the sample frame for Portland and Long Beach and enrollments through December 31, 1986 were included in the S/HMO sample for Brooklyn and Minneapolis.

- The study design was modified to broaden and standardize the definition of impairment. This modification to the evaluation design created a common impairment classification more broadly inclusive of persons with functional impairments than are NHC criteria. This standardized classification approach is consistent with impairment criteria used in other recent national studies of the aged (e.g., the 1982 National Long

Figure 1

EXPERIMENTAL AND COMPARISON GROUP SAMPLES AND STUDY AREAS

S/HMO Impaired and Unimpaired
Enrollee Experimental Sample

- Health status at baseline and selection bias
- Health status changes over time
- Health care expenditures and utilization
  - 24 months prior to enrollment
  - 24 months after enrollment

- Health plan choice (all impaired, subsample of unimpaired)
- Health plan satisfaction (all impaired, subsample of unimpaired)
- Informal caregiving (impaired group only)
- Disenrollee survey (all persons disenrolling from S/HMOs between 6/1/86 and 9/31/86)

Impaired and Unimpaired Fee-for-Service
Medicare Beneficiary Comparison Group

- Health status at baseline and selection bias
- Health status changes over time
- Health care expenditures and utilization
  - 24 months prior to selection
  - 24 months after selection

- Health plan choice (all impaired, subsample of unimpaired)
- Health plan satisfaction (all impaired, subsample of unimpaired)
- Informal caregiving (impaired only)

Impaired and Unimpaired Medicare Enrollees
in Risk-Contract HMO Comparison Group

- Health status at baseline and selection bias
- Health care expenditures and utilization
  - 24 months prior to enrollment (all impaired, subsample of unimpaired)

- Health plan choice (all impaired, subsample of unimpaired)
- Health plan satisfaction (all impaired, subsample of unimpaired)
- Health plan disenrollees (a sample of risk-contract HMO disenrollees between 6/1/86 and 9/31/87)

Term Care Survey). Without such modifications the study would have been restricted in its ability to pool functionally impaired cases across sites. Evaluation generalizability to functionally impaired populations would have been compromised. Standardized criteria are shown in Figure 2.

In addition to nursing home certifiable persons, the evaluation impairment definition added two important subgroups: (1) persons who are severely impaired but not nursing home certifiable and (2) moderately impaired persons. Inclusion of both severely and moderately impaired persons in experimental and comparison group samples expanded the ability of the study to focus attention on a population with a potential for high transition rates between impaired and unimpaired status.

PRIMARY DATA COLLECTION

Primary data collection consists of seven tasks: (1) telephone case-finding survey to construct a longitudinal FFS and HMO comparison group panel (completed); (2) mail questionnaire (i.e., Health Status Form (HSF)) to track well FFS comparison group members (ongoing); (3) baseline Comprehensive Assessment Form (CAF) in-home interview and periodic CAF tracking with frail S/HMO and FFS panel members (ongoing); (4) consumer choice telephone interview with impaired and unimpaired S/HMO, FFS, and HMO comparison group members (completed); (5) out-of-pocket health care expenses and service use tracking with impaired FFS and S/HMO panels (ongoing); (6) case studies of the S/HMO case management, organizational development, and market environments (ongoing); and (7) a planned mail satisfaction survey to S/HMO, FFS, and HMO comparison group members.

TELEPHONE CASE-FINDING SURVEY

The case-finding survey had two purposes: (a) to identify functionally impaired fee-for-service beneficiaries who, after being so identified, received in-home assessments, and (b) to select subsets of persons in the FFS and HMO populations to receive health choice interviews. Persons found to be impaired constituted the impaired FFS comparison group panel. Westat, Inc. conducted these interviews from May 15, 1986 through January 31, 1987.

Case-finding procedures paralleled those used in the 1982 National Long Term Care Survey (NLTC), supported by the U.S. Health Care Financing Administration (HCFA) and the Office of the Assistant Secretary for Planning and Evaluation (ASPE):

- Developing a sampling frame;
- Conducting telephone screening survey (and/or mail questionnaire to those for whom phone number could not be obtained); and
- Conducting an in-home interview among those identified as impaired.

To construct the case-finding sampling frame, Westat used a Medicare

Figure 2

IMPAIRMENT CLASSIFICATION CRITERIA

SEVERE FUNCTIONAL IMPAIRMENT

- Must stay in bed all or most of time; and/or
- Unable to perform one or more activities of daily living (ADL) without assistance (e.g., eating , getting in or out of chairs, toileting, dressing, or bathing)

MODERATE FUNCTIONAL IMPAIRMENT

(Not classified in severe group, but having one or more of these conditions.)

- Unable to perform three or more instrumental activities of daily living (IADLs) without assistance (e.g., prepare meals, do laundry, light housework, shop for groceries, manage money, take medicine, make telephone calls);
- Unable to perform two or more IADLs without assistance and having limitations in mobility (e.g., must stay in the house all or most of the time, or needs the help of another person in getting around inside or outside the house).
- Unable to do at least two of the following: light house work, shopping for groceries, prepare meals; or unable to take medications or make telephone calls without assistance; or unable to get around inside the house without assistance.
- Problems with severe memory loss; as reported by a proxy respondent
- Using a wheelchair or walker;
- All cases considered by the S/HMO, as impaired, on a basis other than the health status form, will also be classified as moderately impaired. Health status assessments occur at the time of enrollment. This status may change over time and not be reflected in the HSF data set. Consequently, any other data available within the S/HMO to reflect the health status of its members at a given time is also considered to be an appropriate basis for health status classification.

UNIMPAIRED

- All those not identified as severely or moderately impaired.

eligibility file data tape containing the names, addresses, age, gender, Medicaid status, and prepaid health plan enrollment dates and health plan code numbers for all beneficiaries in the S/HMO market areas.

To be included in the fee-for-service sampling frame the subject was required to:

- Be alive at the time of the survey;
- Be age 65 or older;
- Be covered by both Part A and B of Medicare;
- Not have end-stage renal disease;
- Not be a member of an HMO or S/HMO as of March 1, 1986;
- Not be in a nursing home as of the date of interview;
- Not be receiving Medicaid as of March 1, 1986; and
- Reside in the S/HMO market area.

In October 1986 a supplemental FFS sample was drawn for all four communities. This was necessary because the overall response rate, particularly among those aged 85 and over, was not as high as had been expected and because the field-verified impairment rate was lower than expected. In developing this expanded sample, individuals in the original Medicare eligible population were again screened against the criteria shown above. Then a sample stratified by age and gender was selected on a probability basis. The sample sizes discussed in this report include the cases added through this supplement.

The case-finding sample was selected to represent a probability sample of Medicare beneficiaries receiving fee-for-service delivery within the S/HMO market area. The FFS moderately/severely impaired comparison sample derived from this sampling frame had been planned to be approximately equal in size to the number of moderately/severely impaired cases enrolled in each S/HMO. Equal experimental and comparison group sample sizes maximized the statistical power of the analysis within the constraint of the maximum number of moderately/severely impaired S/HMO enrollees available for study.

The HMO population within any S/HMO market area consisted of a variety of subgroups. Among these were all HMO members, regardless of enrollment date or type of HMO contract; HMO members who joined a TEFRA HMO for the first time during the period after the S/HMO was in operation; and persons who had recently converted from a non-risk contract HMO to a risk contract membership.

Using the Medicare Health Insurance Master Record files, and the Group Health Plan Master File, evaluators identified all Medicare beneficiaries who met the FFS criteria for inclusion into the comparison sampling frame, and these additional criteria:

- Enrolled in a Medicare-risk contract HMO, and

- Enrolled between June 1985 and March 1, 1986.

The June 1, 1985 to March 1, 1986 period included persons making HMO enrollment decisions since the S/HMOs became operational and actively marketed. The rationale underlying restricting the sample to this time interval was the desire to focus evaluation resources on individuals who had made recent health plan decisions, decisions that could have involved selecting the S/HMO. This group had the best recall of the decision process, and was likely subjected to S/HMO marketing efforts. Persons making recent decisions, as compared to persons joining an HMO before the S/HMO became operational, were most representative of the population from which the S/HMOs had to attract enrollment.

Figure 3 lists the Medicare risk-sharing health plans operational in the S/HMO market areas during the S/HMO subscription period and their Medicare enrollments. Note that no such plans were operational in Brooklyn, New York during this period, and thus an HMO comparison group was not formed in evaluating Elderplan.

The case-finding survey sample received a letter from the project several weeks before the telephone interview. This letter discussed the importance of the study, emphasized the voluntary nature of participation, and requested information regarding any changes in phone number or address. All correspondence was mailed on HCFA letterhead. Persons not responding to the initial mailing received a duplicate second mailing. Non-respondents were then sent a certified letter.

Press releases and contacts with community agencies were also used to help facilitate study visibility and credibility. Among the agencies receiving advance notices were Social Security Administration District Offices, Medicare Directors at the HCFA Regional Offices, Area Agencies on Aging, and Better Business Bureaus.

In addition to performing public relations advance work, evaluators designed the interview protocol to encourage high response rates. Most important in this regard was the attempt to locate proxy respondents in the event that sample members were physically or mentally unable to competently participate in a telephone interview. Overall, 10.1 percent of the interviews were completed by proxies. This rate was substantially higher among persons aged 80 or over (i.e., 18.6% for women and 31.6% for men).

During the course of the case-finding telephone survey, 7.6 percent of sampled persons were found to be ineligible relative to the selection criteria. These persons were deceased, institutionalized, or had moved out of the area. All subjects not definitely known to be ineligible were assumed to be eligible. This almost certainly overstates the actual eligibility rate, since addresses were not confirmed for about 13.9 percent of the eligible beneficiaries. Actual refusals totaled 15.1 percent, and other non-responses totaled 4.8 percent of those thought to be eligible.

At least twice a week Westat forwarded the names and contact information for all functionally impaired persons identified through case finding to

Figure 3

RISK CONTRACT HEALTH PLANS
IN S/HMO MARKET AREAS, JUNE 1986

Portland, Oregon

- Blue Cross/Blue Shield (First Choice)
- Kaiser-Permanente (Medicare Plus)
- Physicians Interhospital Health Plan (The Good Health Package)
- PacifiCare (Secure Horizons)

Approximate Medicare enrollment: 19,900 beneficiaries

Long Beach, California

- Family Health Plan
- Maxicare
- PacifiCare (Secure Horizons)
- United Health Plan

Approximate Medicare enrollment: 79,000 beneficiaries

Minneapolis, Minnesota

- Group Health
- HMO Minnesota
- Medcenters Health Plan
- Physicians Health Plan of Minnesota
- SHARE

Approximate Medicare enrollment: 85,800 beneficiaries

Berkeley Planning Associates (BPA). BPA had recruited a field staff to conduct in-home comprehensive assessments on functionally impaired screened respondents in each of the demonstration site communities. Table 1 summarizes the survey results.

UNIMPAIRED S/HMO AND FFS SAMPLE
HEALTH STATUS INFORMATION TRACKING

Each S/HMO demonstration project was required to collect Health Status Information on all enrollees. The S/HMOs collected this information using a mail self-completion Health Status Form (HSF) at enrollment, and at approximately annual intervals thereafter. The Evaluation Design Report and Data Collection Plan contains the HSF and other instruments used in primary data collection. We adapted the S/HMOs HSF for use at the telephone case-finding interview schedule. At annual intervals for two years following the baseline interview a shortened version of this form is also administered as a self-completion questionnaire for the unimpaired fee-for-service comparison group .

Periodic HSF readministration to unimpaired S/HMO and FFS beneficiaries permits longitudinal monitoring of sample beneficiary functional health status. Panel members with a change in status from unimpaired to impaired will be followed up by Comprehensive Assessment tracking procedures.

Between December 1986 and June 1987, the sites conducted the first annual reassessments of their members. Comparison group reassessments were conducted during Summer and Fall 1987. Persons not responding to these mail questionnaires will be interviewed by telephone. All unimpaired S/HMO and FFS comparison group members are being monitored.

Berkeley Planning Associates (BPA) and the Institute for Health & Aging (IHA) share responsibility for HSF tracking. IHA is responsible for distributing and coding the mail questionnaires and telephone contacts with non-respondents in the unimpaired subsample. Cases reporting declines in health status are referred to the BPA on-site field teams for comprehensive assessments. BPA conducts comprehensive assessments on S/HMO unimpaired enrollees whose annual reassessments indicate a negative change in health status (i.e., subjects who now meet the study's moderately and/or severely impaired classification criteria).

COMPREHENSIVE ASSESSMENT AND PERIODIC
S/HMO AND FFS IMPAIRED GROUP TRACKING

The Comprehensive Assessment Form (CAF) is the primary instrument for gathering health, functional status, and informal support data from the functionally impaired S/HMO and FFS groups. This instrument also includes information on service utilization and costs not available on Medicare data tapes (i.e., use and expenditures for services included in S/HMO chronic care benefits). The CAF form was originally developed by the S/HMO sites and Brandeis University and has been only slightly modified by the evaluation

Table 1

UNWEIGHTED COUNT OF IMPAIRED AND NON-IMPAIRED PERSONS
IN THE S/HMO, HMO, AND FFS SAMPLES

	Sample	Un-Impaired	Impaired	Ineligible	Unlocatable/ Other Non-Respondents	Refusals	Total Completed
Brooklyn							
S/HMO	2667	2389	278	NA	NA	NA	2667
FFS	3408	1290	343	211	1002	562	1633
HMO	NA	NA	NA	NA			
Long Beach							
S/HMO	1826	1472	354	NA	NA	NA	1826
FFS	3555	1810	316	185	777	467	2126
HMO	1000	584	109	43	155	109	693
Minneapolis							
S/HMO	1671	1409	262	NA	NA	NA	1671
FFS	2935	1332	288	444	482	389	1620
HMO	1000	639	72	54	66	169	711
Portland							
S/HMO	4517	3608	909	366	NA	NA	4517
FFS	6760	3795	637	527	836	963	4434
HMO	1000	716	75	39	83	87	791

Source: Classifications are based on telephone or mail questionnaire Health Status Form assessments. These figures are subject to change as in-home comprehensive assessments are completed and tabulated.

team.

A comprehensive assessment form (CAF) is administered to S/HMO members under a variety of circumstances:

- Most commonly, at the time of enrollment into the health plan if the individual meets the S/HMO criteria for nursing home certifiability (e.g., NHC) or other eligibility criteria for chronic care benefits; or
- Also, after enrollment because of changes in health status of individuals identified by annual reHSFs, by referral from a S/HMO physician, from hospital discharge planning, by self-referral, or through other means.

To generate uniform data among the S/HMO impaired group sample to support the evaluation, the S/HMOs modified their routine reCAFing procedures as follows:

- Any S/HMO sample member who at time of enrollment or any later time becomes severely impaired according to the evaluation's criteria of severe (i.e., bed bound or with one or more ADL limitations) will receive a baseline CAF. These CAFs will be conducted by S/HMO case management staff.
- Any S/HMO sample member who, at baseline or subsequently, meets the evaluation's moderate impairment classifications will also receive a CAF. These CAFs will be conducted by BPA nurse assessors.
- Automatic reCAFs at six-month intervals will be conducted with any S/HMO sample member 1) classified as nursing home certifiable (NHC) — using a common cross-site NHC criteria for this classification, or 2) receiving chronic care services. This protocol aligns S/HMO case tracking procedures with those used for the comparison group.
- All moderately impaired (based on the evaluator's criteria) S/HMO sample members will be monitored annually by mail questionnaire.
- If, based on the evaluator's criteria, the beneficiary changes health status — moving from moderate to severe, or severe to NHC — then a CAF is conducted. For severe cases, CAFs will be conducted by S/HMO case managers. For moderates, BPA will administer the CAF.

The comprehensive assessment process used with the FFS comparison group approximates the process followed by the S/HMO sites. To collect CAF data from the functionally impaired fee-for-service sample, BPA recruited nurses and medical social workers in each S/HMO market area. Working under BPA supervision, these nurses and social workers administered the CAF at baseline and at appropriate reassessment intervals. They were responsible for all direct personal contact with respondents.

For comparison group assessments:

- All FFS persons initially identified as severely/moderately impaired during the case-finding telephone interview received an in-home assessment. The home visit also included a brief environmental assessment, identified the formal and informal caregiving resources being used by the individual, and introduced the chronic care expenditure and utilization diary used to monitor out-of-pocket expenditures.

- After this initial visit, assessors maintained periodic contact with severely impaired persons. These contacts typically involved monthly or quarterly telephone contacts depending on the capability of the respondent. These calls monitored the study participant's current address, recorded changes in health status, and collected data on use and out-of-pocket expenditures occurring during the month.

- Moderately impaired respondents had their health status, use and out-of-pocket expenditures tracked quarterly by mail. These periodic contacts paralleled the contact undertaken for the S/HMOs cases. BPA assessors conducted telephone follow-up with all those who did not respond to these mailings.

- Baseline severely impaired persons were automatically reCAFed through in-home CAF interviews every six months.

- All moderately impaired panel members who experienced changes in their health status during the quarter also received an in-home CAF.

BPA began their baseline CAFs in late May 1986 and continued through February 28, 1987. Since then, they have conducted routine reCAFs on severely impaired members and initial CAFs on members with changes in health status. Table 2 shows the number of impaired cases given baseline assessments. Another 782 reassessments have been done.

CONSUMER CHOICE AND SATISFACTION

Westat conducted the consumer choice survey in conjunction with the health screening interviews between May 15, 1986, and January 31, 1987. Among the S/HMO members, interviews began August 20, 1986 and continued through January 31, 1987. This survey involved samples from three populations:

- S/HMO enrollees (both impaired and unimpaired)
- FFS beneficiaries (both impaired and unimpaired)
- HMO enrollees (both impaired and unimpaired)

Each of these samples is a subsample drawn from the probability samples developed in the impairment case-finding phase of the evaluation.

Table 3 shows the number of persons in the choice sample and their response rates. The choice sample was developed to provide approximately equal numbers

Table 2

NUMBER OF BASELINE COMPREHENSIVE ASSESSMENTS
COMPLETED THROUGH JANUARY 31, 1987

	Baseline CAF	Qualified Impaired
Brooklyn		
S/HMO	156	117
FFS	282	165
Long Beach		
S/HMO	341	193
FFS	267	179
Minneapolis		
S/HMO	269	168
FFS	245	167
Portland		
S/HMO	829	422
FFS	617	382

Table 3

UNWEIGHTED COUNT
HEALTH CHOICE SAMPLE CASES

	Sample	Impaired Completes	Unimpaired Completes	Unimpaired Incompletes	Impaired Incompletes
Brooklyn					
S/HMO	356	202	102	31	21
FFS	533	179	320	18	16
Long Beach					
S/HMO	460	203	107	37	63
FFS	542	201	289	28	24
HMO	345	215	103	21	6
Minneapolis					
S/HMO	382	213	96	48	25
FFS	504	201	277	20	6
HMO	320	238	71	10	1
Portland					
S/HMO	451	201	179	34	37
FFS	472	204	229	15	24
HMO	350	256	74	19	1

Impairment classifications are based on telephone or mail questionnaire Health Status Form assessments.

of impaired and unimpaired subgroups in each community. Approximately equal sample sizes across S/HMO, FFS, and HMO subgroups maximized the efficiency of the impaired sample within the evaluation's existing budget. Impaired cases numbered more than the unimpaired cases because the impaired cases had not yet been corrected by field verifications of impairment levels.

Current plans are to recontact the consumer choice sample in the summer of 1988 for questions about their health plan satisfaction. This effort was augmented with a mail survey of persons disenrolling from the S/HMOs and TEFRA HMO competitors during the summer of 1986. Approximately 2,950 enrollees in the 4 S/HMO market areas were contacted.

The satisfaction survey of S/HMO, FFS, and HMO members is planned as a self-completion, mail questionnaire. Its date of administration has been shifted from summer 1987 to 1988. This survey has been postponed to minimize the burden on the evaluation study panels -- especially the impaired sample.

During spring 1987, the evaluator conducted a mail survey of Medicare beneficiaries who disenrolled from the S/HMOs during the period June 1986 to November 1986 and disenrollees from TEFRA HMO competitors during the same period. All persons identified in Medicare records as having disenrolled from selected TEFRA HMOs in the S/HMO market arena during this interval were sent a mail questionaire in February 1987. A follow-up mailing to non-respondents was conducted in June 1987. The rate of return to the disenrollment survey has been disappointing and a final response rate has not been determined. Analysis is complicated by the fact that some of the identified subjects claimed not to have disenrolled from an HMO. A review of returned questionnaires reveals some expected reasons for disenrollment (e.g., moving to another area, inconvenient locations of clinics, dissatisfaction with availability of physicians or specialists) and some unexpected reasons (e.g., respondents did not intend to enroll in the first place).

SERVICE UTILIZATION AND EXPENDITURES

The evaluator collects out-of-plan and non-Medicare Part A and B service use and expenditure data for all impaired persons in the S/HMO enrollee sample and for all impaired persons in the FFS comparison group sample. These data supplement Medicare Part A and Part B service use histories of both fee-for-service and S/HMO evaluation samples. All chronic care service utilization and expenditures and selected non-Medicare services (e.g., home care, social services) are being studied for the functionally impaired S/HMO and fee-for-service comparison groups. Hospital and physician utilization and expenditures are obtained from Medicare claims files and S/HMO claims records (see discussion below on secondary data collection).

The out-of-plan and out-of-pocket expenditure data was collected by means of a service use diary maintained by respondent. This diary used a calendar to stimulate memory, and a record keeping ledger to summarize use and expenditures. BPA staff distribute these diaries during their in-home visits and explain to impaired sample members and/or their caregivers at the time of

their first comprehensive assessment how to use the diary. BPA staff also contacted S/HMO enrollees who had previously received a CAF, and showed them how to keep the diary. Among the FFS groups, compliance is monitored through the following means:

- Sample members who are severely impaired and who are nursing home certifiable (NHC) receive monthly telephone monitoring calls and semiannual personal visits.

- Moderately impaired persons and the non-NHC severely impaired receive quarterly mail questionnaires asking them to summarize service use activity during the previous three months.

- Persons who do not return questionnaires, or whose answers are incomplete or at variance with previous reporting periods receive a telephone call to clarify and complete the form.

- Persons in the FFS sample who experience an adverse change in health status also receive a personal visit and are given a CAF. During such visits the service utilization and expenditure tracking materials are also reviewed.

Among the S/HMO members who were moderately/severely impaired, compliance is monitored through the following means:

- The severely impaired are reviewed and evaluated by the S/HMO case managers every six months. Service use in conjunction with the care plan is routinely monitored on the patient's case record. A service does not have to be covered or paid for by the S/HMO to be included in this care plan.

- Moderately impaired individuals and other impaired S/HMO members not receiving S/HMO benefits receive quarterly mail questionnaires from IHA. Those persons who do not return the mail questionnaires, or whose answers are incomplete, receive a follow-up telephone call from BPA nurse assessors to collect data by phone.

Figure 4 lists the services being tracked or monitored through these procedures.

SECONDARY DATA COLLECTION

Two sources of secondary data are being used for analyses of selection bias and expenditures and service use: Medicare Beneficiary Bill History Retrieval System data for Medicare Part A and Part B service utilization and charges, and the S/HMO management information systems. These data sources produce complete and integrated health care utilization and expenditure records on all study sample subjects. They form the nucleus of the case specific record, into which the study's primary data are merged. These same data sources are also being used to create a data file on all Medicare

Figure 4

CHRONIC CARE UTILIZATION AND EXPENDITURE MONITORING CATEGORIES

HOME HEALTH CARE SERVICES
Visiting Nurse
Physical Therapist
Social Worker
Other Services

Occupational Therapist
Respiratory Therapist
Home Health Aide
Speech Pathologist

OTHER COMMUNITY SERVICES
Adult Day Health Care Center
Social Day Care Center
Homemaker, Housekeeper, or
Chore Service
Other Services

Home Delivered Meals
Electronic Monitoring
(Lifeline)

DENTAL SERVICES
Dentist
Dental hygienist
Orthodontist
Other services

Oral surgeon
Periodontist

TRANSPORTATION SERVICES
Ambulance
Transportation to health services (including taxi, minibus, escort services, and taxi vouchers)

EQUIPMENT AND SUPPLIES
Eyeglass or Contact Lenses
Crutches, Wheelchair, Walker
Corrective Shoes, or other
Orthopedic Device
Hearing Aid
Diabetic Equipment or Supplies
Medical Alert Device or
Electronic Monitoring Device
Other Device or Equipment

Respiratory devices
Prosthesis (artificial arm, leg or breast)
(Seeing-Eye or Hearing-Ear Dog)
Modifications to your home (ramps, elevator, hand rails, raised toilet seat, etc.)

PRESCRIPTION DRUGS AND MEDICATIONS

NURSING HOMES AND BOARD AND CARE HOMES
Skilled Nursing Care (in a hospital or nursing home)
Intermediate Care (in a hospital or nursing home)
Board and Care (including residential care, domiciliary care, family home, etc.)

beneficiaries living within each of the S/HMO market areas.

Medicare Part A includes hospital, home health care, and skilled nursing home claims. Physician and home health care are among the billing claims paid under Medicaid Part B. Part A and Part B claims data have been obtained for all S/HMO enrollees and FFS and HMO comparison group clients for at least one year prior to the date the client entered the S/HMO or entered the study as a comparison group participant.

Data will continue to be collected for each S/HMO or FFS beneficiary an additional 24 months (the elapsed time may be closer to 30 months due to the lag time between service receipt and the claim on the billing tape) or until the beneficiary's death. Medicare data will also continue to be obtained on all S/HMO disenrollees for that portion of the study period during which they are disenrolled.

S/HMO Utilization and Expenditure Client Files are being developed by each of the S/HMO demonstration programs. These files contain information on the use of ambulatory care, hospitals, all chronic care benefits, and any vendor charges. These systems vary in current operational status and integration across records systems. For purposes of the evaluation, the S/HMOs and the evaluators are closely collaborating in the development of a uniform, beneficiary-specific data base from these files. By December 1987, it is anticipated that all S/HMO site will have the ability to provide the evaluator beneficiary-specific computerized files.

Primary and secondary data sets will be appropriately merged into an integrated file for each individual in the evaluation study sample. For S/HMO unimpaired enrollees, only S/HMO use and billing records and HSF data are merged. S/HMO impaired enrollee records include these same data and the primary data collected on non-plan expenditures.

Among the FFS unimpaired comparison group sample, Medicare Part A and B claims are used to to measure service use. These data are combined with HSF data. Impaired FFS files combine HSF and CAF data with Part A and B claims data and data on chronic care and other non-Medicare services collected from service use diaries.

THE S/HMO: AN EVOLVING ORGANIZATIONAL FORM

Recognizing that the S/HMOs operate in a changing, competitive environment, the Health Care Financing Administration commissioned case studies of the S/HMOs to complement the program performance data discussed above. These studies document the evolving forms and functions of the S/HMO model and provide a primarily qualitative analysis of program performance. Three case studies have been developed. Their findings -- encompassing the first 24 to 30 months of S/HMO operations -- are included as Chapters 2, 3, and 6 in this report. These studies will later be updated and elaborated to cover the remainder of the S/HMO demonstration.

The case studies address three issues: (1) the market environment and S/HMO marketing effectiveness; (2) the effectiveness of different S/HMO organizational, management, and financing strategies; and (3) the effectiveness of S/HMO case management systems.

MARKET ANALYSIS

The market analysis examines S/HMO competition within each marketplace and the effectiveness of the S/HMOs in meeting projected enrollment. The analysis is based on data from unaudited quarterly reports submitted by the sites to HCFA and on qualitative data from site visit interviews with program officials and other local informants. The case study addresses such questions as: (1) what were the enrollment patterns of each of the S/HMOs; (2) what were the Medicare enrollment patterns of competing HMOs, PPOs, and insurers in each area; (3) what were the characteristics of competing plans in operation, sponsorship, benefits, premiums, and service delivery; (4) what marketing efforts have been made by competition and by the S/HMOs and how do these relate to actual enrollment trends; (5) how did competition affect the enrollment patterns of the S/HMOs; (6) what other market factors (i.e., physician and hospital bed supply) affected S/HMO marketing effectiveness; (7) did the reputation and the attitudes of the S/HMOs or their participating providers affect marketing; and (8) considering all these factors, how effective has each S/HMO been in marketing its plan to the elderly?

ORGANIZATION, MANAGEMENT, AND FINANCING

This analysis examines the organizational structure, goals, management, and financing, of the four S/HMOs. This study of the S/HMOs as evolving organizations is conducted at six-month intervals over a two-year time period beginning in the Fall of 1986. Data used include interviews, plan documents, and other secondary data sources. Among those interviewed are officials formally associated with each of the S/HMOs, all managers, key professional staff including the medical director, utilization review coordinator, membership services director, fiscal administrator, marketing and public relations director, and case manager coordinator. Directors of all major provider services (e.g., hospital administrator, medical director, and directors of chronic care providers), and selected board members from the S/HMO board, as well as the board of the sponsoring organization, are also interviewed.

Documents and reports reviewed include: articles of incorporation, organizational charts, protocols, contracts, written procedures manuals, applications to federal and state agencies, statistical and financial reports, quarterly reports, actuarial analyses, position papers, in-house memoranda, newspaper articles, and pertinent correspondence with federal and state agencies.

The case study identifies characteristics and strategies that influence the success of the S/HMO as a health care organization. Success is measured

by accomplishing the goals set for the program:

- Attracting enrollees and meeting a minimum target enrollment;
- Preventing adverse selection;
- Controlling hospital and physician utilization within limits typical of other HMOs;
- Controlling chronic care utilization within the projected level in the S/HMO budget;
- Maintaining low disenrollment rates and high consumer satisfaction;
- Providing high quality of care;
- Assuring access to appropriate care services for all in need; and
- Maintaining organizational costs within projected budget.

CASE MANAGEMENT

The S/HMO case management system was designed to reduce fragmentation in service delivery and to integrate acute care and long term care services. The S/HMO case managers assess enrollee functional status, develop individualized care plans, serve as client advocates, coordinate services, and monitor service use. These functions place the case manager in the role of resource allocator. Since expenditures for the expanded long term care benefit were constrained, S/HMO case managers must target these resources in the most cost-effective manner so as to produce acceptable clinical outcomes for enrollees. The process by which the S/HMO case managers translate enrollee needs into services is a critical element in the S/HMO delivery model.

The evaluation of S/HMO case management has three parts: a case management process evaluation; a case management task analysis; and a case management outcome evaluation.

To begin the case management process evaluation, BPA staff interviewed case management staff and reviewed program records. BPA will update this information in spring 1988 and will augment these efforts through a participant observation to document case management activities. These observations should provide valuable insights into each site's case management philosophy and procedures. Special emphasis will be placed on understanding case management decision-making and resource allocation, and on answering these questions: (1) Who in the S/HMO receives case management services; (2) How are S/HMO enrollee chronic service needs met? and (3) What are the costs of case management?

BPA will also quantify case management functions at each site through a time study. All case managers and supervisory staff will participate in the study of the time it takes to perform different case management activities. This study will be conducted over a two-week period at each site in spring 1988. Case management outcomes are addressed in relationship to the analysis of S/HMO impacts on chronic care service utilization and costs.